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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

**In the Matter of**

# Amendment of Parts 1, 21, and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions

**MM Docket No. 97-217**

**File No. RM-9060**

## COMMENTS

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## SUMMARY

Wireless One of North Carolina, L.L.C. ("WONC") supports amending Parts 1, 21 and 74 of the Commission's Rules to enable MDS and ITFS licenses to engage in fixed, two-way transmissions. By revising the definitions, technical standards, interference protection criteria, and application processing methods, the Commission will be providing wireless cable operators and MDS and ITFS licensees the necessary flexibility to utilize their frequencies for two-way transmissions and to provide a service competitive with other telecommunications services. In implementing these revisions, WONC supports the Petitioners' proposals for streamlined application processing procedures in order to ensure that new services are expeditiously introduced.

WONC also supports Petitioners' proposals regarding certain ITFS issues. Allowing ITFS licensees greater flexibility in meeting their programming obligations, including allowing data and voice transmissions to count towards minimum programming requirements and allowing ITFS licensees to satisfy minimum programming requirements on other channels within a wireless cable system, will enable ITFS licensees to fulfill their educational needs while simultaneously permitting the development of two-way transmissions.

Finally, WONC does not believe that the risk of brute force overload interference is great enough for the Commission to mandate the refarming of the MDS and ITFS spectrum. Such interference, when it occurs, can be addressed by other, less drastic measures than those proposed by CTN.

WONC believes that the proposed changes to the Commission's Rules to allow two-way transmissions will ensure the continuing viability of the wireless cable industry, will provide needed competition to other telecommunications services and will better serve the public.

Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Parts 1, 21, and 74	)	MM Docket No. 97-217
to Enable Multipoint Distribution	)	
Service and Instructional	)	File No. RM-9060
Television Fixed Service Licensees	)	
to Engage in Fixed Two-Way	)	
Transmissions	)	

COMMENTS

Wireless One of North Carolina, L.L.C. ("WONC"), by its attorneys and pursuant to Sections 1.415 and 1.419 of the Commission's Rules, hereby submits these comments regarding the proposed amendment to Parts 1, 21 and 74 of the Commission's Rules to enable Multipoint Distribution Service ("MDS") and Instructional Television Fixed Service ("ITFS") licensees to engage in fixed, two-way transmissions.<sup>1</sup>

WONC supports the revisions to the Commission's Rules proposed in the Petition for Rulemaking submitted on March 14, 1997 ("Petition") by the Wireless Cable Association International, Inc. and various wireless cable operators, consulting engineers and MDS and ITFS licensees ("Petitioners").<sup>2</sup> In its Notice of Proposed Rulemaking

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<sup>1</sup> WONC is a wireless cable operator developing an integrated statewide system in North Carolina.

<sup>2</sup> WONC was one of the wireless cable operators who signed on to the Petition.

("NPRM") the Commission proposes to amend its rules to allow fixed, two-way transmissions and to adopt many of the proposals set forth in the Petition. WONC generally supports the proposed changes to the Commission's Rules which will give wireless cable operators and MDS and ITFS licensees the flexibility to utilize their frequencies for two-way transmissions, thereby providing competition to other telecommunications services and better serving the public.

#### I. REVISED DEFINITIONS

WONC supports the proposed revisions to the definitions of "multipoint distribution service" and "multipoint distribution service response station." NPRM at ¶¶ 12-13. WONC also supports the addition of a definition for "response station hub" and the expansion of the current definition of "signal booster station" to enable booster stations to originate programming in addition to relaying programming as provided under the current rules. NPRM at ¶¶ 14-15. In each case, WONC believes that the change in the definitions or the addition of definitions will enable the expansion of MDS to two-way service.

Contrary to the proposal by Caritas Telecommunications, Inc. ("Caritas"), that two-way transmissions be allowed only on the MDS-1, 2 and 2A channels, WONC believes that it is essential to permit two-way transmissions on all MDS and ITFS channels. Rather than being limited to only three MDS channels for response channels, as proposed by Caritas, wireless cable operators need the flexibility to utilize whatever channels necessary, including MDS and ITFS channels, for response channels within

their systems. The decision as to which channels to use for response channels should be based upon the needs of a particular market and there is no public interest reason to artificially limit operators' flexibility.

## II. TECHNICAL STANDARDS

WONC supports the various changes and additions to the technical standards under the Commission's Rules proposed in the Petition and believes that these changes will allow operators the flexibility necessary for two-way transmissions. For example, WONC believes that allowing the subchannelization and superchannelization of the standard 6 MHz MDS and ITFS channels will add flexibility to one-way and two-way wireless cable systems. NPRM at ¶¶ 16-18. Within one wireless cable system, an operator will be able to utilize the channels for a greater variety of services. An operator, in consultation with the licensees, could combine channels or subchannelize as the needs of the public dictate in the market. The wireless cable operator could use superchannels for transmitting high data rates while the subchannels could increase the capacity available on a system. In both cases, wireless cable service would be enhanced.

WONC also supports the Petitioners' proposal to permanently incorporate the out-of-band emission waiver in Sections 21.908 and 74.936 of the Commission's Rules for primary system transmitters and single channel booster transmitters with a power greater than -9dBW EIRP. NPRM at ¶ 20. In addition, WONC believes that there should be no spectral mask requirement for low power broadband boosters with power less than -9dBW. NPRM at ¶ 21. WONC agrees with Petitioners that low power stations with

less than -9dBW of power have limited potential for interference and applying strict emission limitations to them would significantly increase the price of equipment with no added interference protection to the user or nearby licensees. Id.

Regarding frequency tolerance, WONC supports Petitioners' request that the existing +/-1 KHz standard continue in effect for all primary station transmitters and all booster stations with power exceeding -9dBW EIRP. NPRM at ¶ 24. WONC further agrees that there should be no frequency tolerance requirement for booster stations with -9dBW or less EIRP. Id. Similarly, there should be no frequency tolerance requirement for response stations. Id. In addition, WONC agrees with Petitioners' proposal to eliminate Sections 21.908(a), (c)-(e) and Section 74.950(a)-(e) of the Commission's Rules because these rules regarding transmitter installation and performance are incompatible with digital transmissions. NPRM at ¶ 25.

Regarding the Commission's Rules governing radio frequency ("RF") emissions, WONC agrees with the Commission's proposal to amend Section 1.1307 of the Commission's Rules relating to MDS and ITFS and to adopt rules similar to those recently adopted for LMDS licensees. NPRM at ¶ 27.

Further, WONC also supports Petitioners' proposal regarding modulation methods. Any emission should be permissible for any channel of any bandwidth for any class of MDS or ITFS station, utilizing any permissible power, so long as the emission meets applicable out-of-band emission requirements and is capable of causing no greater interference than 8-VSB or 64-QAM. NPRM at ¶ 28. WONC further supports the Commission's proposal that it will remain open to considering different modulation



schemes submitted by parties with appropriate data to support those schemes. NPRM at

¶ 30. WONC believes that as operators and licensees gain experience in operating two-way systems, they will be able to gather data to support other modulation schemes and will provide that data to the Commission.

### III. INTERFERENCE

In the NPRM, the Commission indicates that it plans to adopt Petitioners' proposal to retain the existing interference protection criteria of 45 dB for co-channel interference and 0 dB for adjacent channel interference. The Commission also proposes to adopt the new criteria suggested by Petitioners for hub booster and response stations. WONC believes retaining the current 45 db and 0 db protection standards is the best approach for implementing expedited two-way services.

WONC also believes that the Commission should add a provision to the rules to address situations when the actual interference is de minimis (i.e., when the interference to a licensee's protected service area is very small, or when the interference is to a portion of the 35-mile protected service area that contains no population). WONC believes that the de minimis determination should be made by the Commission on a case by case basis utilizing market-specific factors such as: percentage of geographic service area affected by the interference; percentage of population affected by the interference; and, engineering design. Establishing such a flexible de minimis interference standard will allow grants in cases where the amount of interference is insignificant, will ease processing of applications and will ensure expedited two-way service to the public.

#### IV. APPLICATION PROCESSING

WONC supports the adoption of a rolling, one-day filing window for new or modified MDS/ITFS applications for response station hubs or boosters as proposed in the Petition. NPRM at ¶ 46. All applications filed on the same day would be granted unless a petition to deny was filed against an application. WONC further supports the Petitioners' proposal that the applications be put on public notice without prior staff review and automatically granted on the 61st day. Such a filing system would ensure that two-way service is provided to the public expeditiously.

In addition, and in response to the Commission's inquiry concerning the form of the engineering section of a station application, WONC proposes that the applications for both MDS and ITFS be revised to enable applicants to file multiple engineering sections as part of the same application. For example, one application could have an engineering section for a main station and a booster. Revising the applications in this manner would reduce the administrative burden on the FCC staff that must review the applications.

In the NPRM, the Commission rejects the proposal for automatic grant of the applications claiming that the sixty-day period after the applications appeared on public notice would not provide adequate opportunity for interested parties or the Commission staff to review the interference studies. WONC believes that the additional delay in grant of the applications as proposed by the Commission is unnecessary, and that the applications for response station hubs and boosters should be automatically granted on the 61st day. Sixty days is more than sufficient for interested parties to file petitions to

deny or other objections to applications. The filing of such a petition or objection will prevent automatic grant of the applications. Further, those applications that require consents cannot be granted without those consents.

As to the concerns raised by ITFS licensees regarding the burden on them to monitor and evaluate ITFS and MDS filings, it is not clear that the burden will increase significantly under the above proposal. NPRM at ¶ 50. Many ITFS licensees currently rely on the wireless cable operator to whom they are leasing excess capacity to provide monitoring and evaluation of applications that affect the ITFS licensee's station. Those ITFS licensees who do not rely on a wireless cable operator presently evaluate interference issues on their own and already have their own legal and engineering counsel to assist them. ITFS licensees have the right to file any objections or to refuse to sign consent letters for proposals that would adversely impact the operation of their stations. Similarly, all the information necessary to evaluate a given two-way proposal will be required to be included in an application, therefore the ITFS licensee should not need to request additional information from the applicant to evaluate the proposal.

WONC agrees with ComSpec that agreements between adjoining licensees should be filed with the Commission as part of an application and that changes to the technical parameters of the response station hub receiving antenna systems of those agreements should be provided to the Commission. NPRM at ¶ 51. Further, WONC supports the creation of a Commission database containing the actual operating parameters of every MDS and ITFS system to assist third parties in evaluating these systems. Id. Such a database is a crucial resource for the industry.

WONC supports the Petitioners' proposal of an initial one-week filing window once the new rules go into effect. NPRM at ¶ 54. Under Petitioners' proposal, applicants would have 60 days from the date the applications appear on public notice to resolve conflicts and amend their applications, and an additional 60 days for filing petitions to deny or other objections. WONC believes that Petitioners' proposal for an initial one-week filing window should be adopted. The parties will have 120 days to evaluate proposals and WONC believes that automatic grants in these circumstances is appropriate, and quite frankly, the only feasible methodology for instituting two-way service on a timely basis.

For far too long the wireless cable industry has been hobbled by unwieldy application processing procedures that do not recognize the realities of the marketplace. At this pivotal point in time, when the wireless cable industry is striving to revitalize itself as a robust competitor to wireline operations, it must have the full support of the Commission in expediting new service. The streamlined processing procedures proposed by the Petitioners is crucial to the industry's emergence as an attractive and viable alternative for consumers.

#### V. USE OF 125 kHz CHANNELS

WONC supports the expanded use of the 125 kHz channels to include return paths in a cellularized, two-way system and allowing the channels to be subchannelized and superchannelized. WONC also agrees with Petitioners that the Commission should permit use of the 125 kHz channels for point-to-multipoint transmissions and that such

facilities should be licensed and given the same interference protection as MDS and ITFS facilities. NPRM at ¶ 58.

## VI. ITFS ISSUES

### A. ITFS Programming Requirements

WONC agrees with Petitioners' proposal to revise Section 74.931(e) of the Commission's Rules so that the total number of hours per channel per week of ITFS programming totals 40 hours which includes both actual programming and recapture time. NPRM at ¶ 65. This proposed revision will not change the minimum number of hours of actual programming that an ITFS licensee must transmit but would revise the hours of recapture time to add up to 40 hours. Id. WONC believes this revision provides much needed flexibility to ITFS licensees and their excess capacity lessees.

In addition, WONC does not believe that there should be different rules if a wireless cable system utilizes digital transmissions. In many cases, ITFS licensees are having difficulty fulfilling their programming obligations under the current rules and increasing those obligations would help neither ITFS licensees nor wireless cable operators. Furthermore, WONC believes that any increases in programming in a digital environment should be negotiated between the wireless cable operator and the ITFS licensee and should not be dictated by the Commission.

WONC also supports allowing data and voice transmissions to count towards minimum ITFS programming requirements. As long as the transmissions meet the content requirements established by the Commission, the format of the programming

should not matter. In this regard, WONC agrees with the Petitioners statement that "content used in connection with the education of students" could also flow from the receive sites to response station hubs and to receive sites from primary and booster stations. NPRM at ¶ 69. By giving licensees and operators the flexibility to operate two-way systems, the Commission is committing itself to accepting new methods for fulfilling these programming requirements which in fact reflect the evolution that is taking place in educational programming.

**B. Shift of ITFS Programming**

WONC supports allowing ITFS licensees to be allowed to satisfy minimum programming requirements on other channels within a wireless cable system including MDS channels. NPRM at ¶ 70. Allowing this shift in programming and revising the rules to eliminate the requirement that programming be transmitted on one of an ITFS's licensee's channels will provide greater flexibility to operators serving the public with two-way service and also fulfill the educational needs of ITFS licensees and their receive sites.

WONC also agrees with the proposal of Schwartz Woods & Miller ("SWM") that would allow the exchange of ITFS and MDS channels and that would require the ITFS licensee to be reimbursed by the wireless cable operator for the cost of that exchange. WONC believes that maximum flexibility is necessary if wireless cable systems are going to survive and deliver a viable service to the public. Thus, WONC supports allowing the exchange of channels between MDS and ITFS parties. This will ensure downstream use

of channels by ITFS licensees and also two-way use by the operator. This will allow the wireless cable operator to group channel usage to its best advantage. WONC does not believe that the Commission should require ITFS licensees to retain one channel for downstream video use. Such usage should be dictated by the needs of the ITFS licensee and its receive sites and not by the Commission. It is entirely possible that an ITFS licensee will find two-way transmissions much more useful to itself or related schools rather than video. By making such a requirement, the Commission would be unnecessarily limiting the use of the ITFS frequencies.

C. Autonomy of ITFS Licensees

WONC does not believe that Commission intervention in the contractual relationships between wireless cable operators and ITFS licensees is necessary. Many of the issues raised by ITFS commenters can be addressed in the lease agreements negotiated between the ITFS licensee and wireless cable operator. Not all contracts require the same protections as every relationship and every market is different. As pointed out by Petitioners, "no ITFS or MDS licensee can be forced to devote its channels to a cellularized transmission system without its consent." NPRM at ¶ 80. ITFS licensees can be protected by allowing channel swapping and reimbursement for channel changes, and by the fact that cellularization participation is not mandatory.<sup>3</sup> These protections should be included in the Commission's rules. However, WONC does not believe that the Commission should establish additional solutions by rule and

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<sup>3</sup> WONC does not believe it is necessary to increase reservation of ready recapture time for ITFS programming in order to protect ITFS licensees.

interfere in the contractual relationship between the wireless cable operator and ITFS licensee. In addition, WONC believes that contractual arrangements are the way to address concerns regarding potential threats to the financial autonomy of ITFS licensees. Commenters who have raised concerns regarding an ITFS licensee's dependence on wireless cable operators for costs of equipment ignore the fact that many ITFS licensees currently depend on wireless cable operators for the cost of equipment under the current rules. It is up to the parties to negotiate the appropriate remedy to ensure continued autonomy by the ITFS licensee, as well as successful operation by the wireless cable operator.

WONC opposes establishing a requirement that ITFS leases approved or submitted under the previous rules be amended to indicate that the parties to the lease have reviewed the rules and made the appropriate changes to the lease. NPRM at ¶ 87. It is up to the parties to the lease to determine if changes are necessary. If amendments to the lease are necessitated by the revisions to the rules, then the amended lease will have to be filed with the Commission.

WONC does not believe that the proposed rules will make it harder for ITFS licensees to sever their relationship with wireless cable operators. Many commenters claim that the new rules will make ITFS licensees more dependent on wireless cable operators. In reality, there will be no greater dependence than exists currently, and that which exists currently was based on a multitude of individual decisions made by ITFS licensees. The concerns of ITFS licensees can be alleviated by provisions in the agreements between licensees and operators. What the proposed rules underscore is the



existing obligation of each ITFS licensee to determine its objectives and how to achieve them when it obtains an ITFS license in the first place.

D. Accountability

WONC supports the elimination of Section 74.982 of the Commission's rules. In the two-way environment, the burden of requiring an ITFS licensee to transmit its call sign outweighs the benefits.

VII. PROPOSALS BY THE CATHOLIC TELEVISION NETWORK

WONC does not support the Catholic Television Network's ("CTN") proposed solution to the potential brute force overload that might be caused by interference from response station transmitters to ITFS receive sites which are not co-channel or adjacent channel but which are located in close proximity to the ITFS receive sites.<sup>4</sup> In its Request, CTN suggests that the way to address the potential for brute force overload is to provide sufficient separation between upstream and downstream transmissions. *Id.* at p. 2-3. According to CTN, if there is sufficient spectrum between upstream and downstream transmissions brute force overload can be prevented. Specifically, CTN proposes refarming the E, F, G and H channel groups in order to create a contiguous band of ITFS spectrum at 2500-2620 MHz, as well as a band of contiguous spectrum for response transmissions at 2644-2690 MHz. Request at p. 3.

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<sup>4</sup>CTN raised its concerns regarding the two-way proposal in a Request for Supplemental Comment Period and Extension of Time filed with the Commission on November 25, 1997 ("Request"). Pursuant to the Request, the Commission extended the comment and reply comment deadlines. Order Extending Time for Filing Comments and Reply Comments, MM Docket No. 97-217, (released December 5, 1997) ("Order").

WONC does not believe that the potential for brute force overload interference is as great as suggested by CTN and, in situations where such interference occurs, it can be alleviated in ways other than those suggested by CTN. For example, installation of upgraded downconverters will eliminate the problem in some cases. However, the proposal to refarm all the frequencies as put forth by CTN is too extreme a solution for such a manageable problem.

In many markets brute force overload interference will not occur and refarming the frequencies is unnecessary. While it is true that separating the downstream and upstream transmissions may be necessary, such decisions should be left to the wireless cable operators based upon the needs of the individual markets and of the MDS and ITFS licensees in those markets and not by Commission mandate. Allowing the individual operators and ITFS licensees to develop solutions to this problem together on a market-by-market basis, will ensure that the best solution emerges in each market. This will be particularly true if the Petitioners' proposal obligating the response station hub licensee to be responsible for curing brute force overload interference is adopted. In cases where such interference cannot be cured, then the transceiver should have to cease operating.

Further, WONC does not believe that response stations should be limited to only the G and H group channels or that G-Group licensees should have the power to prevent two-way transmissions in a particular market as proposed by CTN. Such limitations on the number of response channels and spectrum for such channels would reduce the flexibility and efficiency of two-way transmissions. Further, giving G-Group


licensees veto power also opens operators in those markets to greenmail by the G-Group licensee. This kind of problem has hamstrung the industry previously and a procedure which encourages such a result must be avoided. The proposals put forth by CTN could doom the success of two-way service and should not be adopted.

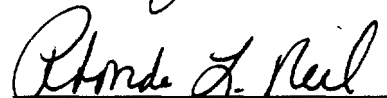
## CONCLUSION

WONC believes that if the wireless cable industry is to be a viable competitor in the telecommunications marketplace, it must have as much flexibility as possible to meet the demands of the public for new and innovative services. Without this flexibility, the industry cannot evolve to meet consumer needs. The proposed revisions to the rules to allow two-way transmissions will provide the crucial flexibility, and the revisions should be adopted as provided herein.

Respectfully submitted,

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